

PCTWORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 : C08F 220/28, 220/38, A61L 33/00, C08F 246/00		A1	(11) International Publication Number: WO 97/41164 (43) International Publication Date: 6 November 1997 (06.11.97)
(21) International Application Number: PCT/GB97/01173		(81) Designated States: AU, CA, GB, JP, NO, US, European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).	
(22) International Filing Date: 30 April 1997 (30.04.97)			
(30) Priority Data: 9608882.8 30 April 1996 (30.04.96) GB		Published <i>With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>	
(71)(72) Applicants and Inventors: LUTHRA, Ajay, Kumar [GB/GB]; 219 Somervell Road, South Harrow, Middlesex HA2 8UA (GB). SANDHU, Shivpal, Singh [GB/GB]; 63 Lascelles Road, Slough, Berkshire SL3 7PW (GB).			
(74) Agent: URQUHART-DYKES & LORD (READING); 1 Richfield Place, 12 Richfield Avenue, Reading RG1 8EQ (GB).			

(54) Title: NON-THROMBOGENIC AND ANTI-THROMBOGENIC POLYMERS

(57) Abstract

Polymers having non-thrombogenic properties can be prepared by copolymerising monomers of at least three classes selected from (a) monomers having sulphate groups, (b) monomers having sulphonate groups, (c) monomers having sulphamate groups, and (d) monomers having polyoxyalkylene ether groups, (e) monomers having zwitterionic groups. The monomers can additionally be provided with anti-thrombogenic properties by including an additional comonomer having a pendant heparin (or hirudin, warfarin or hyaluronic acid) group. The polymers can be used as coating materials for medical devices, such as tubing or connectors, in order to provide them with non-thrombogenic, and optionally anti-thrombogenic, properties.